

INFORMATION REPORT

CD NO.

618064

COUNTRY East Germany

DATE DISTR 12 May 1964

SUBJECT: East German MOINS. Political Situation. East German

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PLACE
ACQUIRED

25X1A

NO OF ENCLS
(LISTED BELOW)

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SUPPLEMENT TO
REPORT NO.

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The following are the East German norms for zirconium hydride powder and zirconium dioxide. These norms were established in this form in April and June 1955 respectively for the East German high frequency industry. They are now valid.

3. Zirconium hydride powder

1) Description (Begriff)

Zirconium hydride is a phosphoric inflammable powder of gray-black color with high gas binding capacity and good heat reflection.

2) Delivery product

a) Composition

Bismuth, more than 85.0%
 Hydrogen, about 4% (saturated)
 Magnesium, less than 0.01%
 Iron, less than 0.02%
 Cobalt, less than 0.2%
 Titanium, less than 1.0%
 Chlorine, less than 0.005%
 Manganese, less than 0.02%
 Aluminum, less than 0.01%
 Chromium, less than 0.01%
 Silicon, less than 0.01%
 Lead, less than 0.01%
 Calcium, less than 0.01%

b) Designation

Zirconium hydride powder WN 112-27

CLASSIFICATION SECRET

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3) Quality

Grain size 0.5 to 3 microns. The grains smaller than 0.5 microns are not to exceed 10%. Zirconium powder in finest form mixed with air can be explosive

4) Use

As getter substance and as coating of tube parts to increase heat reflection. For soldering with tungsten molybdenum and graphite anodes.

5) Mode of Delivery

Hydrogen saturated zirconium hydride powder is to be delivered for safety reasons only in small partial deliveries of 100 to 500 grams each in well-locked boxes of sheet iron and is to be stored in the same way.

6) Safety Rules

Zirconium hydride powder is not to be processed near open flames or unprotected furnace flues. Since inflammable zirconium powder is precipitated in the flue channels due to frequent use, these channels are to be cleaned at certain periodic intervals.

7) Examination

Chemical analysis according to AV 013-20.
H₂ contents according to AV 013-20.
Grain size according to AV 013-21.
Tube test as needed.

b. Zirconium dioxide1) Description

Zirconium dioxide is a white powder. It can be reduced to metal only through application of strong reduction agents such as magnesium, calcium or alkaline metals.

2) Delivery producta) Composition

Component	Zirconium Dioxide	
	K	M
Iron, less than	0.3%	0.1%
Titanium, less than	1.0%	1.0%
Chlorine, less than	0.05%	0.05%
SO ₄ , less than	0.05%	0.05%
PO ₄ , less than	0.1%	0.1%
SiO ₂ , less than	1.0%	1.0%
Shed weight, gram per cubic inch	10 to 10 less than 10	

Use of zirconium dioxide K: for ceramic substances

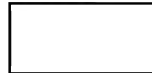
and special glasses which will resist conversion to a crystalline state. Use of zirconium dioxide

M: for metallic zirconium powder

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b) Designation

Zirconium dioxide K, WN 117-26
Zirconium dioxide M, WN 117-26

3) Quality

Zirconium dioxide is very stable chemically

4) Mode of Delivery

In wooden pails containing about 50 kilograms

5) Examination

Chemical analysis according to AV 013-26
Shed weight according to AV 013-27

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